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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,478	11/26/2001	Matthew D. Ornes	ZETTA-01009US0GGG	5175
32605	7590	01/12/2006	EXAMINER	
MACPHERSON KWOK CHEN & HEID LLP 1762 TECHNOLOGY DRIVE, SUITE 226 SAN JOSE, CA 95110			NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,478

Applicant(s)

ORNES ET AL.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 9-16 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 9-16 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. This application is in condition for allowance except for the following formal matters:

- a) In claims 1-5 and 9-16, all bracketed bold and italicized cross-referencing text should be deleted.
- b) In claim 1 line 20, "port (or ports) identification or identifications (Re's)" should be changed to --port identification (Re) or ports identifications (Re's)--.
- c) In claim 1 line 23, "Egress port (or ports, aE's)" should be changed to --Egress port (aE) or ports (aE's)--.
- d) In claim 2 lines 17-18, "port (or ports) identification or identifications (Re's)" should be changed to --port identification (Re) or ports identifications (Re's)--.
- e) In claim 2 lines 20-21, "Egress port (aE, or ports, aE's)" should be changed to --Egress port (aE) or ports (aE's)--.
- f) In claim 4 line 8, "port (or ports) identification (Re)" should be changed to --port identification (Re) or ports identifications (Re's)--.
- g) In claim 4 line 9, "Egress port (or ports, aE's)" should be changed to --Egress port (aE) or ports (aE's)--.
- h) In claim 5 line 12, "the" should be deleted to avoid lack of antecedent basis for "the ingress and/or egress signal lines".
- i) In claim 12 line 15, "relative relative identifications (Re_x)" should be changed to --relative egress identifications (Re_x)--.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

2. Claims 1-5 and 9-16 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claims 1-5 and 9-16, none of the prior art discloses a Programmably-sliceable Switch-fabric Unit (PSSU) having a capability of functioning as an $N \times N'$ crossbar, and also having a capability of being programmably sliced to instead function as a plurality of $S \times S'$ virtual switch slices, where $S < N$ and $S' < N'$, wherein N does not have to equal N' , and S does not have to equal S' ; said PSSU comprising: (a) absolute Ingress ports (al 's) and absolute Egress ports (aE 's) that are alternatively identifiable as Relative ingress ports (Ri 's) and Relative egress ports (Re 's) of respective ones of said virtual switch slices, where the al 's can receive routing requests and payloads that are to be routed, and where the aE 's can output routed payloads to corresponding destinations; and (b) a request translator, operatively coupled to the al 's for receiving routing requests from the al 's, said request translator having: (b.1) first means for determining, based on the absolute Ingress port identification of an ingress port on which a given request arrived, what virtual switch slice a corresponding payload signal belongs to; (b.2) second means for determining from a Relative egress port

identification or ports identifications specified directly or indirectly in the given request, and from the identification of the virtual switch slice provide by said first means, which absolute Egress port (aE) or ports (aE's) the corresponding payload signal is to egress from in accordance with the given request; and (b.3) third means for altering the given request before the request is submitted to a scheduler so that the altered request asks for egress of the corresponding payload signal from said determined aE or aE's.

Furthermore, referring to claim 3, none of the prior art discloses (a) determining if an ingress-related error exceeding a predefined and corresponding threshold is observed for requests and/or payloads arriving through a given ingress port; (b) if the exceeding error rate is observed, determining which virtual switch slice is associated with the given ingress port whose ingress-related error rate is exceeding the predefined and corresponding threshold, and disabling that virtual switch slice.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,550,816 to Hardwick et al disclose in Figure 2 a switching device containing two virtual switches 152,154, each virtual switch includes a decision mechanism for determining an associated directive based on a destination identifier within a received data packet; the packet is then delivered through an associated data port on a determined virtual switch. Refer to Column

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22, line 44 to Column 24, line 16; Column 25, line 38 to Column 26, line 35; and Column 29, lines 28-64.


U.S. Patent No. 6,693,904 to McKenzie et al disclose in Figure 1 a bit-sliced switch fabric 100 in which each demultiplexer 102 receives and parallelizes incoming signals such that every m^{th} bit of the incoming signal is transmitted to the same parallel switch 104, and each multiplexer 106 receives from each of the eight switches 104 a different bit for each byte of an outgoing signal and serializes those bits to form the outgoing signal. Refer to Column 1, line 50 to Column 2, line 40.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng 
December 23, 2005


RICKY Q. NGO
SUPERVISORY PATENT EXAMINER